

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of)	
)	
Amendment of the Commission's Space)	IB Docket No. <u>02-34</u>
Station Licensing Rules and Policies)	
)	
2000 Biennial Regulatory Review --)	
Streamlining and Other Revisions of Part 25)	
of the Commission's Rules Governing the)	
Licensing of, and Spectrum Usage by, Satellite)	IB Docket No. 00-248
Network Earth Stations and Space Stations)	

**THIRD REPORT AND ORDER AND SECOND FURTHER NOTICE OF
PROPOSED RULEMAKING IN IB DOCKET NOS. 02-34 AND 00-248**

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By the Commission: Chairman Powell issuing a separate statement

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I. INTRODUCTION

1. In this Order, we adopt a standardized form for space station license applications, as we proposed in the *Space Station Reform NPRM*.¹ We also adopt a new form and revisions to existing forms for earth station applications, as proposed in the *Part 25 Earth Station Streamlining NPRM*, and we direct the Chief, International Bureau, to revise the International Bureau Filing System (IBFS) as needed to make these forms available.² These actions will enable the Commission to review space station and earth station applications more quickly than is now possible and, therefore, speed service to the public.

II. BACKGROUND

¹ Amendment of the Commission's Space Station Licensing Rules and Policies, 2000 Biennial Regulatory Review -- Streamlining and Other Revisions of Part 25 of the Commission's Rules Governing the Licensing of, and Spectrum Usage by, Satellite Network Earth Stations and Space Stations, *Notice of Proposed Rulemaking and First Report and Order*, IB Docket Nos. 02-34 and 00-248, 17 FCC Rcd 3847 (2002). In this document, the Commission adopted a Notice of Proposed Rulemaking (NPRM) in IB Docket No. 02-34, and a First Report and Order in IB Docket No. 00-248. When we are referring to the NPRM portions of the document, we will cite it as "*Space Station Reform NPRM*." When we are referring to the Order portions of the document, we will cite it as "*First Part 25 Earth Station Streamlining Order*."

² 2000 Biennial Regulatory Review -- Streamlining and Other Revisions of Part 25 of the Commission's Rules Governing the Licensing of, and Spectrum Usage by, Satellite Network Earth Stations and Space Stations, *Notice of Proposed Rulemaking*, IB Docket No. 00-248, 15 FCC Rcd 25128 (2000) (*Part 25 Earth Station Streamlining NPRM*).

2. In recent years, the Commission has initiated two proceedings intended to streamline our satellite-related licensing procedures. The first was the *Part 25 Earth Station Streamlining NPRM*, which primarily proposed revisions to our earth station licensing rules, including earth station license application forms and information requirements.³ That NPRM also invited comment on a standardized form for space station applications, to be called "Schedule S."⁴ The Commission adopted a Further NPRM in this proceeding in 2002.⁵ With three exceptions, the issues raised in the *Part 25 Earth Station Streamlining NPRM* and *Part 25 Earth Station Streamlining Further NPRM* remain pending.⁶

3. The second streamlining proceeding was initiated in the *Space Station Reform NPRM*, in which the Commission proposed revisions to its space station licensing rules, and adopted certain rule revisions based on the record developed in response to the *Part 25 Earth Station Streamlining NPRM*. In pertinent part, the Commission decided to adopt Schedule S, but proposed revisions to the form.⁷ The Commission has addressed all the issues raised in the *Space Station Reform NPRM* except those related to application forms and information requirements. Those issues were deferred to this Order.⁸

³ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25150-52 (paras. 67-71), 25153 (paras. 76-77).

⁴ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25152 (paras. 72-75).

⁵ 2000 Biennial Regulatory Review -- Streamlining and Other Revisions of Part 25 of the Commission's Rules Governing the Licensing of, and Spectrum Usage by, Satellite Network Earth Stations and Space Stations, *Further Notice of Proposed Rulemaking*, IB Docket No. 00-248, 17 FCC Rcd 18585 (2002) (*Part 25 Earth Station Streamlining Further NPRM*).

⁶ The Commission revised its rules to allow for 15-year satellite and earth station license terms, rather than 10-year terms. *First Part 25 Earth Station Streamlining Order*, 17 FCC Rcd at 3894-96 (paras. 139-46). The Commission also decided to adopt a standardized space station license application form called Schedule S, but invited comment on revisions to the form. *First Part 25 Earth Station Streamlining Order*, 17 FCC Rcd at 3875-79 (paras. 84-94). In addition, the Commission has eliminated a receive-only earth station licensing requirement based on pleadings filed in response to the *Part 25 Earth Station Streamlining NPRM*. See 2000 Biennial Regulatory Review -- Streamlining and Other Revisions of Part 25 of the Commission's Rules Governing the Licensing of, and Spectrum Usage by, Satellite Network Earth Stations and Space Stations, *Second Report and Order*, IB Docket No. 00-248, FCC 03-128 (released June 19, 2003) (*Second Part 25 Earth Station Streamlining Order*). In this document, the Commission adopted a Second Report and Order in IB Docket No. 02-34, and a Second Report and Order in IB Docket No. 00-248. When we are referring to the portions of the document related to IB Docket No. 02-34, we will cite it as "*Second Space Station Reform Order*." When we are referring to the portions of the document related to IB Docket No. 02-34, we will cite it as "*Second Part 25 Earth Station Streamlining Order*."

⁷ *First Part 25 Earth Station Streamlining Order*, 17 FCC Rcd at 3875-79 (paras. 84-94).

⁸ Amendment of the Commission's Space Station Licensing Rules and Policies, *First Report and Order*, IB Docket No. 02-34, FCC No. 03-102 (released May 19, 2003) (*First Space Station Reform Order*) at para. 13 n.36. See also *Second Space Station Reform Order* at paras. 7-9 (adopting streamlined satellite fleet management modification procedure based on the record developed in response to the *Space Station Reform NPRM*).

4. In this Order, we consider the issues raised by the proposed revisions to application forms and information requirements contained in both original NPRMs. Twelve parties filed comments and seven filed replies in response to the *Space Station Reform NPRM*. Thirteen parties filed comments and eleven filed replies in response to the *Part 25 Earth Station Streamlining NPRM*. These pleadings are listed in Appendix A.⁹ We address space station issues in Section III., and earth station issues in Section IV. We defer consideration of the remaining proposals in the *Part 25 Earth Station Streamlining NPRM* and the *Part 25 Earth Station Streamlining Further NPRM* to a future Order.¹⁰ Nothing in this Order is intended to prejudice our actions on any of those proposals. Section V. is a Conclusion Section. Finally, in Section VI., we invite comment on extending our mandatory electronic filing requirements to all space station and earth station applications, and all pleadings filed in response to those applications.

III. SPACE STATION RULE REVISIONS

A. Background

5. Form 312 is the application form for authorizations related to space station and earth station facilities. In 2000, the Commission invited comment on an addition to Form 312, to be called "Schedule S," to standardize some of its space station application data requirements.¹¹ Specifically, the Commission noted that standardizing some of the satellite application information requirements would make it easier to develop a database for information on licensed satellites.¹² The Commission also stated that Schedule S would "assist in the process toward complete electronic filing for the satellite industry."¹³ Later, in the *First Part 25 Earth Station Streamlining Order*, the Commission found that the comments filed in response to Schedule S generally supported its adoption.¹⁴ The Commission noted that it might be able to expedite its review of satellite applications if it adopted a more detailed and standardized application form based upon the information requirements in Section 25.114 of its rules.¹⁵

⁹ The terms we use to refer to each of the parties are also listed in Appendix A. For purposes of this proceeding, we refer to the pleadings filed in response to the *Part 25 Earth Station Streamlining NPRM* as "Earth Station Comments" or "Earth Station Reply." We refer to the pleadings filed in response to the *Space Station Reform NPRM* as "Space Station Comments" or "Space Station Reply."

¹⁰ We recently adopted a *Further Notice* in the *Part 25 Earth Station Streamlining* proceeding. 2000 Biennial Regulatory Review -- Streamlining and Other Revisions of Part 25 of the Commission's Rules Governing the Licensing of, and Spectrum Usage by, Satellite Network Earth Stations and Space Stations, *Further Notice of Proposed Rulemaking*, IB Docket No. 00-248, 17 FCC Rcd 18585 (2002) (*Part 25 Earth Station Streamlining Further NPRM*). We defer consideration of the issues raised in the *Part 25 Earth Station Streamlining Further NPRM* to a future Order.

¹¹ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25191-25201 (App. C), cited in *First Part 25 Earth Station Streamlining Order*, 17 FCC Rcd at 3876 (para. 85). Schedule S was designed to standardize many but not all of the Commission's information requirements because the Commission found that many of its information requirements were more easily provided in narrative form. *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25152 (para. 75).

¹² *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25152 (paras. 73-75).

¹³ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25152 (para. 75).

¹⁴ *First Part 25 Earth Station Streamlining Order*, 17 FCC Rcd at 3876 (para. 87).

¹⁵ *First Part 25 Earth Station Streamlining Order*, 17 FCC Rcd at 3875 (para. 84).

6. Section 25.114 specifies the information required of satellite license applicants in support of their applications. We need this information to determine whether a proposed satellite system would further the public interest as required by Section 309(a) of the Communications Act.¹⁶ Schedule S was designed to standardize many of the information requirements set forth in Section 25.114. Table S1 collects general information regarding the applicant. In Table S2, applicants specify the frequency bands they plan to use. Table S3 collects Geostationary Satellite Orbit (GSO) orbit location information, and Tables S4 and S5 collect information on Non-Geostationary Satellite Orbit (NGSO) orbits. Tables S6 through S13 collect information on the satellite's or satellites' beams, transponders, emissions, and related technical parameters. Table S14 includes information on remote tracking, telemetry, and control (TT&C) locations. Tables S15 and S16 collect data on the physical and electrical characteristics of the spacecraft. S17 is a list of certifications.¹⁷

7. In the *First Part 25 Earth Station Streamlining Order*, the Commission decided to adopt a Schedule S.¹⁸ The Commission deferred the effective date of the new form, however, to consider proposals for new and revised information requirements.¹⁹ Based on the comments, we adopt Schedule S as revised. In the short term, we expect that adding some detail and standardization of some satellite application information requirements will enable us to conduct our current satellite application review more easily than we do now, as envisioned in the *First Part 25 Earth Station Streamlining Order*.²⁰ In the long term, we expect that the information requirement standardization in Schedule S will assist in the process toward complete electronic filing for the satellite industry, as envisioned in the *Part 25 Earth Station Streamlining NPRM*.²¹ In other words, we expect Schedule S to enable us, eventually, to automate some or all of our satellite license application review.

8. Accordingly, we hereby delegate authority to the Chief, International Bureau, to make the electronic filing system revisions necessary to fully implement the Schedule S in IBFS in a manner that maximizes efficiency and minimizes time for review of applications. We also direct the International Bureau to issue a public notice at least 30 days before space station applicants will be required to use the fully implemented Schedule S form in IBFS. Until full electronic implementation of the Schedule S is completed, applicants are directed to print out the Schedule S form from the IBFS home page and submit a completed Schedule S as a PDF attachment to associated space station filings. Below, we consider the comments filed in response to the *Space Station Reform NPRM* regarding Schedule S, including proposals to revisit our decision to adopt Schedule S, and to eliminate certain information requirements currently in the Commission's

¹⁶ 47 U.S.C. § 309(a) (2000).

¹⁷ Appendix C is Schedule S in its entirety as proposed in the *Space Station Reform NPRM*. Appendix D is Schedule S with the revisions we adopt in this Order.

¹⁸ *First Part 25 Earth Station Streamlining Order*, 17 FCC Rcd at 3876-77 (para. 88).

¹⁹ *Space Station Reform NPRM*, 17 FCC Rcd at 3877 (para. 88), 3903-14 (App. C).

²⁰ *Space Station Reform NPRM*, 17 FCC Rcd at 3878 (para. 93).

²¹ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25152 (para. 75).

rules. We then discuss whether Direct Broadcast Satellite (DBS) applicants should submit applications on Schedule S.

B. Need for Commission Information Requirements

9. *Background.* SIA proposes to require satellite applicants to submit only the information required for ITU submissions by Appendix 4 to the ITU's Radio Regulations, rather than all of the information now required in Section 25.114(c). SIA argues that, by requiring applicants to file ITU information concurrently with their application, the Commission can submit advance publication information to the ITU earlier.²² SIA also contends that requiring any information other than that required by Appendix 4 is duplicative or unnecessary, and therefore opposes Schedule S.²³ Similarly, Intelsat claims that there is substantial overlap between the Section 25.114(c) information requirements and ITU Appendix 4 requirements, and recommends eliminating the redundant provisions of Section 25.114(c).²⁴ On the other hand, Teledesic generally supports the adoption of a Schedule S, and most, but not all, of the specific information proposals.²⁵

10. *Discussion.* We decline to eliminate our satellite application information requirements and rely exclusively on the information requirements of ITU Appendix 4, or to revisit our decision to add a Schedule S to Form 312. As an initial matter, the proposals to discard Schedule S are not in the correct procedural posture. As part of the *First Part 25 Earth Station Streamlining Order*, the Commission concluded to add a Schedule S of some sort to Form 312.²⁶ Parties opposing that decision should have filed a petition for reconsideration of that decision. Furthermore, proposals to abolish the satellite application information requirements in Section 25.114 are beyond the scope of the Notices of Proposed Rulemaking on this issue. In the *Part 25 Earth Station Streamlining First NPRM*, the Commission proposed merely adopting a form to standardize information requirements in Section 25.114.²⁷ In the *Space Station Reform NPRM*, the Commission invited comment on revising Schedule S to include more detail in some information requirements.²⁸ At no time has the Commission proposed eliminating its space station application information requirements in their entirety. Thus, parties wishing to propose such an extensive rule revision should have filed a petition for rulemaking.

²² SIA Space Station Comments at 19-20.

²³ SIA Space Station Comments at 37-39. SES Americom supports SIA's proposals. SES Americom Space Station Comments at 9.

²⁴ Intelsat Space Station Comments at 23-24.

²⁵ Teledesic Space Station Comments at 39.

²⁶ *First Part 25 Earth Station Streamlining Order*, 17 FCC Rcd at 3876-77 (para. 88).

²⁷ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25152 (para. 75).

²⁸ See *Space Station Reform NPRM*, 17 FCC Rcd at 3877-78 (paras. 89-92). We discuss these additional details in Section III.D. below.

11. Regardless of the procedural issues, we would not eliminate Schedule S. Our technical and regulatory requirements are not the same as the ITU requirements. For example, the ITU does not require space stations in geostationary satellite orbit to be capable of operating 2° apart in orbit, which has been the cornerstone of the Commission's orbit assignment framework for the past two decades.²⁹ Much of the information required in our rules goes towards demonstrating compliance with our 2° orbital spacing requirement. The information in Section 25.114 ensures that the satellites will comply with our rules. Moreover, we cannot allow our satellite services to be governed exclusively by ITU rules because we have no direct control over those requirements and there is no guarantee that ITU rules will be adequate for U.S. operations.

12. Furthermore, our licensing requirements does not affect the Commission's ability to file Appendix 4 information with the ITU. The Appendix 4 information is in separate forms, which may be provided to Commission staff at the same time the application is filed. The Appendix 4 information in its entirety may be forwarded to the ITU very shortly after Commission staff has completed its review, as has been our practice. Thus, we disagree with SIA's and Intelsat's assertion that providing the information in Section 25.114 in addition to Appendix 4 information is administratively burdensome for applicants.

C. DBS and DARS

13. The *Space Station Reform NPRM* invited comment on revisions to our procedures for all satellite license applications except Direct Broadcast Satellite (DBS) and Digital Audio Radio Satellite (DARS) applications.³⁰ More recently, however, the Commission adopted the *Part 100 Order* to eliminate the DBS-specific requirements in Part 100 from our rules, and to incorporate those requirements into Part 25 so that DBS regulation more closely reflects the regulation of other satellite services.³¹ In the *Part 100 Order*, the Commission required, among other things, that DBS applicants complete Form 312 and provide the information specified in Section 25.114.³² The Commission also noted that this proceeding was pending, and that "DBS applicants will be subject to any revisions to the satellite license information requirements that we adopt in [this proceeding]."³³

14. Accordingly, we require DBS license applicants to submit applications on Form 312, including Schedule S. The *Part 100 Order* was released prior to the date replies were due in this proceeding, and so prospective DBS licensees were given an opportunity to voice any concerns

²⁹ Licensing of Space Stations in the Domestic Fixed-Satellite Service and Related Revisions of Part 25 of the Rules and Regulations, *Report and Order*, CC Docket No. 81-704, FCC 83-184, 54 Rad. Reg. 2d 577 (released Aug. 16, 1983); Licensing Space Stations in the Domestic Fixed-Satellite Service, 48 F.R. 40233 (Sept. 6, 1983) (*Two Degree Spacing Order*).

³⁰ *Space Station Reform NPRM*, 17 FCC Rcd at 3850 n.4.

³¹ Policies and Rules for the Direct Broadcast Satellite Service, *Report and Order*, IB Docket No. 98-21, 17 FCC Rcd 11331 (2002) (*Part 100 Order*).

³² *Part 100 Order*, 17 FCC Rcd at 11349-50 (paras. 35-36), citing 47 C.F.R. § 25.114 (2001).

³³ *Part 100 Order*, 17 FCC Rcd at 11350 n.132.

they may have had regarding Schedule S.³⁴ Moreover, the rule revisions adopted in this Order that affect DBS applicants are limited to the minor changes in information requirements that we proposed for all satellite applicants, and changes in the format in which applicants must submit license application information. These rule changes are rules of agency procedure or practice, and can be adopted without a notice-and-comment rulemaking.³⁵ Furthermore, we note that the information requirements specific to DBS applications will continue to be required in narrative form, as they are under the rules adopted in the *Part 100 Order*.³⁶

15. As we stated in the *Space Station Reform NPRM*, however, we are not considering changes to the procedural rules applicable to DBS applications.³⁷ To clarify, none of the satellite license rule revisions adopted in this Order, except the revisions to Section 25.114, will apply to DBS applicants. Thus, DBS will not be subject to the streamlined satellite fleet management modification procedure we adopted in the *Second Space Station Reform Order*.³⁸ For the same reason that we are not considering changes to other DBS rules in this proceeding, we are not considering changes to the rules applicable to DARS applications. Thus, we will continue to require DARS license applications and modification applications to be filed on Form 312, without Schedule S. We do not anticipate any new license applications for DARS in the near future, however, because there is no spectrum available for additional DARS licensees.

16. We concluded in the *First Space Station Reform Order* that DBS and DARS applicants should be permitted but not required to submit applications electronically.³⁹ Below, we invite comment on mandatory electronic filing for DBS and DARS applications.⁴⁰

D. Revised and New Information Requirements

1. Background

17. When the Commission decided to include a Schedule S in Form 312, it also deferred the effective date of the new form to consider proposals for new and revised information requirements.⁴¹ For example, the Commission proposed making the information requirements for applications for non-voice non-geostationary satellite orbit (NGSO) mobile satellite service

³⁴ The *Part 100 Order* was released on June 13, 2002. Replies in this proceeding were due on July 2, 2002.

³⁵ See Administrative Procedure Act, 5 U.S.C. § 553(b)(3)(A) (2000).

³⁶ *Part 100 Order*, 17 FCC Rcd at 11349-50 (paras. 35-36). See also Sections 25.114(d)(16) and (17), as revised in Appendix B of this Order below.

³⁷ *Space Station Reform NPRM*, 17 FCC Rcd at 3850 n.4.

³⁸ *Second Space Station Reform Order* at App. B (Section 25.118(e)). DBS operators will be permitted to request license modifications under the same procedure they and other satellite operators do now, as set forth in Section 25.117(d)(1). That is, the licensee files a Form 312 application showing the new or changed information that would result from the proposed modification.

³⁹ *First Space Station Reform Order* at para. 3 n.4.

⁴⁰ Section VI. below.

⁴¹ *First Part 25 Earth Station Streamlining Order*, 17 FCC Rcd at 3877 (para. 88).

(MSS) satellites consistent with the information requirements for other NGSO applications.⁴² It also sought comment on collecting some of the information currently required by our rules in more detail, such as digital and analog emission modulation characteristics,⁴³ PFD at angles of arrival between 5° and 25° above the horizontal plane,⁴⁴ and polarization.⁴⁵ It further proposed requiring space station applicants to provide the antenna gain pattern contour diagrams in the .gxt format required in submissions to the ITU.⁴⁶

18. We received relatively few comments on the substance of Schedule S. We adopt our proposed information requirement revisions that were unopposed. Specifically, we adopt our proposals to collect data on tracking, telemetry and control (TT&C) facilities and on the physical characteristics of spacecraft, and to require more detailed information in non-geostationary orbit (NGSO) satellite applications.⁴⁷ We address comments regarding specific Schedule S issues below.

2. Analog and Digital Emission Modulation Characteristics

19. *Background.* Many of the Schedule S revisions in the *Space Station Reform NPRM* were designed to standardize more information requirements than were in the Schedule S originally proposed in the *Part 25 Earth Station Streamlining NPRM*.⁴⁸ For example, we proposed using Schedule S to collect detailed data on digital and analog emission modulation characteristics as required by Section 25.114(c)(8).⁴⁹ Specifically, Table S11 of Schedule S as proposed is entitled "Typical Emissions," and requests information regarding each planned emission on each transponder.⁵⁰ Tables S12 and S13 were designed to collect more information on the emissions listed in Table S11. We proposed collecting data on digital modulation parameters in Table S12 and data on analog modulation parameters in Table S13.⁵¹

⁴² *Space Station Reform NPRM*, 17 FCC Rcd at 3877 (para. 89).

⁴³ *Space Station Reform NPRM*, 17 FCC Rcd at 3877 (para. 89).

⁴⁴ *Space Station Reform NPRM*, 17 FCC Rcd at 3877-78 (para. 91).

⁴⁵ *Space Station Reform NPRM*, 17 FCC Rcd at 3878 (para. 92).

⁴⁶ *Space Station Reform NPRM*, 17 FCC Rcd at 3877 (para. 90).

⁴⁷ *See Space Station Reform NPRM*, 17 FCC Rcd at 3877 (para. 89).

⁴⁸ *Space Station Reform NPRM*, 17 FCC Rcd at 3877 (para. 89).

⁴⁹ *Space Station Reform NPRM*, 17 FCC Rcd at 3877 (para. 89), citing 47 C.F.R. § 25.114(c)(8).

⁵⁰ *Space Station Reform NPRM*, 17 FCC Rcd at 3810 (App. C). *See also* Appendix C of this Order below.

⁵¹ *Space Station Reform NPRM*, 17 FCC Rcd at 3811-12 (App. C). *See also* Appendix C of this Order below. For purposes of this section of the Order, "Table S11" refers to the Typical Emissions table of Schedule S as proposed in the *Space Station Reform NPRM*, unless stated otherwise. "Table S12" refers to the proposed Digital Modulation Parameters table, and "Table S13" refers to the proposed Analog Modulation Parameters table, unless stated otherwise. For reasons explained below, we renumber these tables in the Schedule S we adopt in this Order.

20. *Discussion.* Teledesic questions whether two separate tables on analog and digital transmissions are needed.⁵² We proposed two tables because the information requests in Tables S12 and S13 are not the same for the two types of transmissions and do not fit easily into a single table.

21. Teledesic further argues that, if we decide to keep Tables S12 and S13 as separate tables, the emission designator in Item S11(c) can be used as the "emission ID" in Tables S12 and S13.⁵³ We disagree with Teledesic that we could use the emission designator in Item S11(c) as the "emission ID" in Tables S12 and S13. Different modulation parameters with different performance requirements can give rise to the same emission designator.⁵⁴ Therefore, we must include a column for a unique modulation ID to connect the information in Table S11 to the information in Tables S12 and S13.

22. Teledesic maintains that, if we adopt its suggestion to use the emission designator as the modulation ID, then the "Emission Designator" in Items S12(b) and S13(b) are duplicative of the "Digital Modulation ID" in Item S12(a) and the "Analog Modulation ID" in Item S13(a).⁵⁵ Similarly, in response to Items S12(b) and S13(b), Teledesic contends that a "Modulation ID" column is unnecessary and that we should use a single code to connect the emission table to the modulation tables.⁵⁶ Although we have decided against using the emission designator as the emission ID, we agree with Teledesic that some of the information in Tables S11, S12, and S13 are duplicative. Specifically, we find that Items S11(c) and S11(d) are duplicative of Items S12(b), S12(c), S13(b), and S13(c). We need to collect the emission designator and assigned bandwidth only once. Therefore, we will delete Items S11(c) and S11(d) from Table S11.

23. Teledesic contends further that the "emission bandwidth" requested in Item S11(d) and the "energy dispersal bandwidth" requested in Item S11(h) should be provided only in the specific carrier information/modulation tables.⁵⁷ We need not consider Teledesic's argument regarding Item S11(d) because we are deleting this information requirement.⁵⁸ With respect to the "energy dispersal bandwidth" requested in Item S11(h), however, we observe that we do not

⁵² Teledesic Space Station Comments, Annex 1 at 4.

⁵³ Teledesic Space Station Comments, Annex 1 at 3.

⁵⁴ For example, emissions using Binary Phase-Shift Keying (BPSK) and Quadrature Phase-Shift Keying (QPSK) with different modulation parameters and different performance objectives can give rise to the same emission designator. BPSK is a form of modulation in which data are transmitted using two phase states, and QPSK is a form of modulation in which data are transmitted using four phase states. See Amendment of the Commission's Rules to Provide for Operation of Unlicensed NII Devices in the 5 GHz Frequency Range, *Memorandum Opinion and Order*, ET Docket No. 96-102, 13 FCC Rcd 14355, 14376 nn. 65, 66 (1998), citing The New IEEE Standard Dictionary of Electrical and Electronics Terms, *Fifth Edition* (1993); Telecommunications: Glossary of Telecommunications Terms, *Federal Standard 1037B* (1991).

⁵⁵ Teledesic Space Station Comments, Annex 1 at 4.

⁵⁶ Teledesic Space Station Comments, Annex 1 at 3.

⁵⁷ Teledesic Space Station Comments, Annex 1 at 3.

⁵⁸ See para. 22, *supra*.

collect this information in either Table S12 or S13. Therefore, we will keep Item S11(h) in Table S11.

24. Teledesic asserts that questions in Items S12(j) and S13(p), regarding carrier-to-noise ratios (C/N), are not clear. Teledesic also recommends moving the "Total C/N performance objective" questions in Items S12(j) and S13(p) to Table S11 if they relate to performance of the carrier in clear-sky conditions, but argues that these items belong in Tables S12 and S13 if they relate to the minimum C/N that this type of carrier can support.⁵⁹ We intended the "Total C/N performance objective" questions to refer to the minimum C/N that this type of carrier can support. In other words, this C/N objective relates solely to modulation and not to link considerations. Accordingly, we will keep Items S12(j) and S13(p) in Tables S12 and S13, respectively, and we will explain these questions in the instructions to Schedule S.

25. Teledesic further contends that the questions on "single-entry C/I objective" in Items S12(k) and S13(q) are more relevant to the Table S11 emission table link budget information. Teledesic also questions whether a single C/I value is relevant for cases of time-varying interference such as NGSO systems, given that the C/I value should be related to a certain time percentage in these cases.⁶⁰ Teledesic suggests requiring that NGSO applicants provide fade margin and availability objectives for the application of Recommendation ITU-R S.1323 as an Annex to Schedule S.⁶¹ We decline to adopt Teledesic's proposed new information requirement. We do not currently require NGSO applicants to provide the information on fade margin and availability objectives specified in Recommendation ITU-R S.1323, and this information is not necessary to determine whether a proposed NGSO system will meet the technical requirements of Part 25.

26. With respect to the questions on number of carriers per transponder in Items S12(d) and S13(d), Teledesic maintains that this number varies with the bandwidth of the transponder and the power available, and recommends moving these items to Table S11.⁶² Teledesic is correct with respect to the number of carriers per transponder in Items S12(d) and S13(d). In addition to modulation, the number of carriers per transponder also depends on the bandwidth and power available in any given transponder. Therefore, we will move Items S12(d) and S13(d) to Table S11 and delete them from Tables S12 and S13. In addition, we will move Items S12(e) and S13(e), "Carrier Spacing," to Table S11 because this information is closely related to the number of carriers per transponder.

27. Finally, Teledesic's comments on Tables S11, S12, and S13 in general reveal that these tables as proposed in the *Space Station Reform NPRM* were difficult to follow. We believe the form would be clearer if applicants provide typical emission information before they provide digital or analog modulation parameters. Accordingly, we revise the order of these tables. In the version of Schedule S we adopt in this Order, Table S11 is "Digital Modulation Parameters." Table S12 is "Analog Modulation Parameters." Table S13 is "Typical Emissions." These revisions are displayed in Appendix D to this Order.

⁵⁹ Teledesic Space Station Comments, Annex 1 at 4.

⁶⁰ Teledesic Space Station Comments, Annex 1 at 4.

⁶¹ Teledesic Space Station Comments, Annex 1 at 4.

⁶² Teledesic Space Station Comments, Annex 1 at 4.

3. Antenna Gain Contour Diagrams in .gxt Format

28. *Background.* In the *Space Station Reform NPRM*, we proposed requiring space station applicants to submit antenna gain contour diagrams, currently required by Section 25.114(c)(7), in the .gxt format required by the ITU.⁶³ We noted that this would both facilitate applicants' preparation of ITU submissions, and our analysis of applications.⁶⁴

29. *Discussion.* Teledesic supports requiring antenna gain contour diagrams in .gxt format for GSO satellite applications, but claims that this format is not well suited to NGSO satellites with steerable beams. Teledesic recommends giving applicants the option of providing antenna gain contour information in the form of gain as a function of off-axis angles.⁶⁵ We agree with Teledesic that the .gxt format does not lend itself to NGSO applications. We also note that the ITU does not require antenna gain contour diagrams for NGSO satellites in the .gxt format. Therefore, we adopt our .gxt format proposal only for GSO applications. However, we will not change our current antenna gain contour requirements for NGSO applications in this proceeding. In other words, NGSO applicants are free to provide antenna gain contour information as they have in the past, consistent with the requirements of current Section 25.114(c)(7).

4. Power Flux Density

a. Detailed PFD Information

30. *Background.* Section 25.114(c)(9) directs GSO applicants to provide data on power flux density (PFD), but does not provide any guidance on how detailed those calculations should be.⁶⁶ In the *Space Station Reform NPRM*, the Commission proposed collecting more precise data on the PFD levels of proposed satellites. The Commission noted that the PFD limits established in Section 25.208 for angles of arrival between 5° and 25° above the horizontal plane are functions of the angle of arrival.⁶⁷ The Commission also noted that space station applicants are required to show that they will comply with the PFD limits in Section 25.208, but not in any

⁶³ *Space Station Reform NPRM*, 17 FCC Rcd at 3877 (para. 90), citing 47 C.F.R. § 25.114(c)(7). Section 25.114(c)(7) requires that applicants provide "[p]redicted space station antenna gain contour(s) for each transmit and each receive antenna beam and nominal orbital location requested. These contour(s) should be plotted on an area map at 2 dB intervals down to 10 dB below the peak value of the parameter and at 5 dB intervals between 10 dB and 20 dB below the peak values, with the peak value and sense of polarization clearly specified on each plotted contour."

⁶⁴ *Space Station Reform NPRM*, 17 FCC Rcd at 3877 (para. 90).

⁶⁵ Teledesic Space Station Comments at 39.

⁶⁶ 47 C.F.R. §25.114(c)(9).

⁶⁷ *Space Station Reform NPRM*, 17 FCC Rcd at 3877-78 (para. 91), citing 47 C.F.R. §§25.208(a), (b), (c)(2), (d)(2), (f) (2001). Section 25.208 sets PFD limits for all angles of arrival, but those limits do not vary with the angle of arrival between 0° and 5°, and between 25° and 90°.

particular format.⁶⁸ The Commission therefore invited comment on requiring space station applicants to specify PFD values at angles of arrival equal to 5, 10, 15, 20 and 25°.

31. *Discussion.* While Teledesic does not oppose this proposal,⁶⁹ it argues that the rules specify different reference bandwidths for calculating Maximum PFD in different frequency bands. Teledesic recommends creating a separate column in Table S8 for reference bandwidth.⁷⁰ We find that a column for reference bandwidth would make it easier for applicants using Schedule S to demonstrate compliance with the PFD requirements in Part 25. We therefore adopt Teledesic's recommendation.

32. Teledesic also asserts that the maximum PFD information requested in Item S11(n) is unnecessary given that we require detailed PFD calculations to be provided in Table S8.⁷¹ We disagree. The Commission's rules set PFD limits at all angles of arrival above the horizontal plane.⁷² We focused on the PFD levels for angles of arrival between 5° and 25° in Table S8 and the *Space Station Reform NPRM* because those limits in Section 25.208 are a function of the angle of arrival.⁷³ Furthermore, as explained further below, we need to know the maximum power flux densities for conducting interference analyses in our review of license applications.⁷⁴ Accordingly, we will require applicants to provide the PFD information specified in both Item S11(n) and Table S8.

b. Applicant Certification

33. *Background.* In the *Space Station Reform NPRM*, we proposed mandating that satellite applicants certify that they will comply with the PFD limits in Section 25.208, in addition to the more detailed PFD information requirements discussed above.⁷⁵ Intelsat argues that, if satellite operators are required to certify compliance with the Commission's PFD limits, they should not also be required to provide any specific information regarding PFD levels.⁷⁶

34. *Discussion.* We will keep both the specific PFD information requirements and the certification requirement in Schedule S. We need to know the maximum power flux density values in Table S11(n)⁷⁷ for conducting interference analyses in our review of license

⁶⁸ *Space Station Reform NPRM*, 17 FCC Rcd at 3877-78 (para. 91), citing 47 C.F.R. §25.114(c)(10).

⁶⁹ Teledesic Space Station Comments at 40.

⁷⁰ Teledesic Space Station Comments, Annex 1 at 2.

⁷¹ Teledesic Space Station Comments, Annex 1 at 3.

⁷² See 47 C.F.R. § 25.208 (2001).

⁷³ *Space Station Reform NPRM*, 17 FCC Rcd at 3877-78 (para. 91), citing 47 C.F.R. §§ 25.208(a), (b), (c)(2), (d)(2), (f).

⁷⁴ See Section III.D.4.b. below.

⁷⁵ *Space Station Reform NPRM*, 17 FCC Rcd at 3878 (para. 92), citing 47 C.F.R. § 25.208.

⁷⁶ Intelsat Space Station Comments at 24.

⁷⁷ *Space Station Reform NPRM*, 17 FCC Rcd at 3910 (App. C).

applications. However, these PFD values do not necessarily demonstrate that each individual proposed emission will comply with Section 25.208 at all points on the Earth's surface. Therefore, we need both the PFD information and the certification to be certain that the licensee will not operate its proposed system with PFD levels that are likely to cause harmful interference.

5. Polarization

35. *Background.* Finally, in the *Space Station Reform NPRM*, the Commission proposed expanding Schedule S to include items relating to polarization isolation, polarization switching, and alignment of polarization vectors relative to the equatorial plane. We observed that we need this information to determine whether the space station will meet requirements in Section 25.210 of our rules.⁷⁸ Section 25.210(a)(1) of the Commission's rules requires C-band satellite operators to employ orthogonal linear polarization, and Section 25.210(a)(3) requires C-band satellite operators to have switchable polarization.⁷⁹ Section 25.210(i) requires that space station antennas in the Fixed-Satellite Service be designed to provide a cross-polarization isolation such that the ratio of the on axis co-polar gain to the cross-polar gain of the antenna in the assigned frequency band is at least 30 dB within its primary coverage area.⁸⁰

36. *Discussion.* SES Americom maintains that only applicants for C-band satellites should be required to provide information on polarization isolation, polarization switching, and alignment of polarization vectors relative to the equatorial plane.⁸¹ We agree with respect to polarization switching and alignment of polarization vectors relative to the equatorial plane. These requirements apply only to C-band satellites under the Commission's rules.⁸² We disagree with SES Americom that our polarization isolation requirements apply only to C-band satellites. Section 25.210(i) of the Commission's rules states that this requirement applies to all FSS satellites, not just C-band satellites.⁸³ In addition, the Commission extended this requirement to DBS satellites in the *Part 100 Order*.⁸⁴

37. Intelsat maintains that the orthogonal linear polarization and switchable polarization requirements are no longer necessary because they only protect analog television transmissions.⁸⁵ SES Americom replies that eliminating these requirements would make C-band coordination difficult or impossible.⁸⁶ SES Americom argues further that C-band analog television transmissions

⁷⁸ *Space Station Reform NPRM*, 17 FCC Rcd at 3878 (para. 92), citing 47 C.F.R. §§ 25.210(a), (i) (2001).

⁷⁹ 47 C.F.R. §§ 25.210(a)(1), (3).

⁸⁰ 47 C.F.R. § 25.210(i). DBS licensees are also subject to this cross-polarization requirement. See *Part 100 Order*, 17 FCC Rcd at 11385-86 (para. 115); 47 C.F.R. § 25.215.

⁸¹ SES Americom Space Station Comments at 9-10.

⁸² 47 C.F.R. § 25.210(a).

⁸³ 47 C.F.R. § 25.210(i).

⁸⁴ *Part 100 Order*, 17 FCC Rcd at 11385-86 (para. 115); 47 C.F.R. § 25.215.

⁸⁵ Intelsat Space Station Comments at 24-25.

⁸⁶ SES Americom Space Station Reply at 19.

are still prevalent, although declining in use.⁸⁷ We agree with SES Americom that C-band analog television transmissions continue to play a role in satellite telecommunications. Moreover, proposals to revise satellite technical requirements are outside the scope of this proceeding.

6. Other Schedule S Issues

38. Teledesic recommends continuing to allow applicants to provide additional information in narrative form.⁸⁸ Section 25.114(c)(16) gives applicants an opportunity to discuss public interest considerations in support of their applications.⁸⁹ Our adoption of Schedule S will continue to allow satellite applicants to provide this additional information in narrative form.

39. Teledesic urges the Commission to make Schedule S available in software that allows applicants to import and export data to other programs, such as Excel spreadsheets, rather than complex relational databases.⁹⁰ Teledesic also requests us to make the information available in a format other than Acrobat (.pdf), that does not permit manipulation of the data.⁹¹ We conclude that adopting Teledesic's proposal will make it easier for space station applicants to complete Schedule S.

40. Teledesic asserts that questions regarding "Range of orbital arc and reasons thereof" in Items S3(g), (h), and (i) of Schedule S are unnecessary if the Commission eliminates the fungibility policy.⁹² Under the fungibility policy, the Commission could assign a GSO satellite applicant to an orbit location other than the ones for which it applied, to help resolve mutually exclusive situations in processing rounds.⁹³ We recently eliminated the fungibility policy,⁹⁴ and

⁸⁷ SES Americom Space Station Reply at 19.

⁸⁸ Teledesic Space Station Comments at 40.

⁸⁹ 47 C.F.R. § 25.114(c)(16).

⁹⁰ Teledesic Space Station Comments, Annex 1 at 4-5.

⁹¹ Teledesic Space Station Comments, Annex 1 at 5.

⁹² Teledesic Space Station Comments, Annex 1 at 1. Prior to the *First Space Station Reform Order*, the Commission issued satellite licenses pursuant to processing rounds. Under the original processing round procedure, when the Commission received a satellite license application, it invited other parties to file competing applications. See *First Space Station Reform Order* at paras. 8-10 (more detailed description of original processing round procedure). As part of the original processing round procedure, the Commission has historically treated orbital locations as fungible and has held that applications seeking assignment to the same orbit location do not give rise to comparative hearing rights. See *Assignment of Orbital Locations to Space Stations in the Domestic Fixed Satellite Service, Memorandum Opinion and Order*, 84 FCC 2d 584, 601 (para. 45) (1981) (*1980 Assignment Order*); *Establishment of Satellite Systems Providing International Communications, Report and Order*, CC Docket No. 84-1299, 101 FCC 2d 1046, 1176 n.168 (1985) (*Separate Systems Order*). The fungibility policy was applied in the original procedure where it is not possible to assign to each participant in a processing round the exact orbital location that is requested. In those situations, rather than institute lengthy proceedings to decide which of several applicants should be assigned to a requested location, we assign some other GSO location to that applicant. *First Space Station Reform Order* at para. 155.

⁹³ *First Space Station Reform Order* at para. 155.

we agree with Teledesic that our questions regarding "Range of orbital arc and reasons thereof" are now no longer necessary. Accordingly, we remove these requirements from Section 25.114. Satellite license applicants are permitted but not required to provide information on range of orbital arc and reasons thereof. These items will be designated "optional" on Schedule S.

41. Teledesic also notes that some NGSO satellites have steerable beams in order to maintain a constant footprint. According to Teledesic, for these satellites, the "Peak gain of beam" in Items S6(c) and S6(d) can vary depending on where the satellite is relative to the center or edges of the service area.⁹⁵ Teledesic assumes that these questions relate to maximum gain under all conditions of beam pointing.⁹⁶ Teledesic is correct. We will explain these points in the instructions for Schedule S.

42. Teledesic requests that we add a footnote to the form specifying that "Polarization alignment" in Item S6(i) applies only to linearly polarized beams.⁹⁷ Teledesic is correct. Rather than adding a footnote to Schedule S, however, we will explain this in the Schedule S instructions.

43. Teledesic assumes that "Output Power" in Item S6(l) is the output power of the satellite traveling wave tube amplifier (TWTA) or solid state power amplifier (SSPA) before any transmission losses to the antenna, listed in Item S6(k), and asserts that this would be more clear if the order of Items S6(k) and S6(l) were reversed.⁹⁸ We intended "Output Power" in this case to refer to the effective power after transmission losses to the antenna are accounted for. Therefore, we will not reverse the order of Items S6(k) and S6(l), but we will explain these questions in the Schedule S instructions.

44. Teledesic also maintains that the question regarding Item S4(d), "Orbit Epoch Date," is unclear, and should be optional because it does not apply to all satellite systems.⁹⁹ We agree that the Orbit Epoch Date is relevant only for NGSO satellites. Table S4 is required only for NGSO applications, however. Thus, we conclude that Teledesic's concerns have been addressed, and no revisions to Table S4 are necessary. Nevertheless, to ensure that Item S4(d) is clear, we will explain Item S4(d) in the instructions for Schedule S.

45. Finally, Teledesic argues that Item S2(d), "Nature of Service," and Item S4(o), "Active Service Arc – Other," are unclear.¹⁰⁰ We will explain those items in the instructions for Schedule S.

E. Non-U.S.-Licensed Satellite Operators

⁹⁴ *First Space Station Reform Order* at paras. 158-59.

⁹⁵ Teledesic Space Station Comments, Annex 1 at 2.

⁹⁶ Teledesic Space Station Comments, Annex 1 at 2.

⁹⁷ Teledesic Space Station Comments, Annex 1 at 2.

⁹⁸ Teledesic Space Station Comments, Annex 1 at 2.

⁹⁹ Teledesic Space Station Comments, Annex 1 at 1.

¹⁰⁰ Teledesic Space Station Comments, Annex 1 at 1.

46. *Background.* Under the terms of the World Trade Organization (WTO) Agreement on Basic Telecommunications Services (WTO Telecom Agreement),¹⁰¹ 78 WTO Members, including the United States, have made binding commitments to open their markets to foreign competition in satellite services.¹⁰² Consistent with those WTO commitments, the Commission has adopted a framework for considering requests for U.S. market access by non-U.S.-licensed space station operators.¹⁰³ Under that framework, requests for U.S. market access by non-U.S.-licensed space station operators must include the same information concerning the satellite as is required for U.S.-licensed satellites.¹⁰⁴ In the *Space Station Reform NPRM*, the Commission invited comment in the *Space Station Reform NPRM* on requiring that requests for U.S. market access be filed on Schedule S, in the event that we adopt that requirement for U.S. satellite applicants.¹⁰⁵

47. *Discussion.* Telesat supports a uniform format for applications.¹⁰⁶ Telesat also recommends, however, patterning the informational requirements for non-U.S.-licensed operators filing a Letter of Intent on the requirements and format required under the ITU Radio Regulations, to the greatest possible extent.¹⁰⁷ Further, Telesat supports a mandated electronic filing requirement and encourages the Commission to make publicly available "Validation Software" to potential applicants, as the ITU has done.¹⁰⁸ Telesat explains that Validation Software would check that all mandatory fields are completed within allowable ranges.¹⁰⁹

¹⁰¹ The WTO came into being on January 1, 1995, pursuant to the Marrakesh Agreement Establishing the World Trade Organization (the Marrakesh Agreement). 33 I.L.M. 1125 (1994). The Marrakesh Agreement includes multilateral agreements on trade in goods, services, intellectual property, and dispute settlement. The General Agreement on Trade in Services (GATS) is Annex 1B of the Marrakesh Agreement. 33 I.L.M. 1167 (1994). The WTO Telecom Agreement was incorporated into the GATS by the Fourth Protocol to the GATS (April 30, 1996), 36 I.L.M. 354 (1997) (Fourth Protocol to the GATS).

¹⁰² Fourth Protocol to the GATS, 36 I.L.M. at 363. See also *DISCO II*, 12 FCC Rcd at 24102 (para. 19). The United States made market access commitments for fixed and mobile satellite services. It did not make market access commitments for Direct-to-Home (DTH) Service, Direct Broadcast Satellite Service (DBS), and Digital Audio Radio Service (DARS), and took an exemption from most-favored nation (MFN) treatment for these services as well. See Fourth Protocol to the GATS, 36 I.L.M. at 359. Generally, GATS requires WTO member countries to afford most-favored nation (MFN) treatment to all other WTO member nations. "With respect to any measure covered by this Agreement, each Member shall accord immediately and unconditionally to services and service suppliers of any other Member treatment no less favourable than that it accords to like services and service suppliers of any other country." GATS Article II, paragraph 1. Member nations are permitted to take "MFN exemptions," however, under certain circumstances specified in an annex to GATS. See GATS Annex on Article II Exemptions.

¹⁰³ Amendment of the Commission's Regulatory Policies to Allow Non-U.S. Licensed Satellites Providing Domestic and International Service in the United States, *Report and Order*, IB Docket No. 96-111, 12 FCC Rcd 24094 (1997) (*DISCO II*).

¹⁰⁴ 47 C.F.R. § 25.137.

¹⁰⁵ *Space Station Reform NPRM*, 17 FCC Rcd at 3890 (para. 127).

¹⁰⁶ Telesat Comments at 5.

¹⁰⁷ Telesat Comments at 5.

¹⁰⁸ Telesat Comments at 5.

48. We conclude that non-U.S.-licensed space station operators seeking access to the U.S. market should provide the same information that we require from U.S. satellite license applicants. That is, non-U.S.-licensed space station operators must submit requests for U.S. market access on Form 312, including Schedule S. In *DISCO II*, the Commission concluded that it needs all the technical information that would be required of a U.S. satellite license applicant to enable the Commission to determine whether the non-U.S.-satellite system will comply with all applicable Commission technical requirements.¹¹⁰ Our adoption of Schedule S does not affect the Commission's basis in *DISCO II* for concluding that non-U.S.-licensed satellite operators seeking access to the U.S. market should provide the same technical information on the same forms as U.S. satellite applicants.

49. In this Order, we considered and rejected proposals to abandon Schedule S in favor of reliance on the information in ITU submissions, in part because allowing U.S. satellite services to be governed exclusively by ITU rules would deprive us of direct control over those requirements, and there is no guarantee that ITU rules will be adequate for U.S. operations.¹¹¹ Accordingly, we will not base information requirements for non-U.S. satellite operators on ITU requirements, as Telesat suggests. In response to Telesat's recommendation for validation software, we note that we are currently upgrading our International Bureau Filing System (IBFS), and those upgrades will eventually include validation for data entry.

F. Elimination of Outdated Rules

50. The *Part 25 Earth Station Streamlining NPRM* cited several satellite service rules that have become obsolete, and proposed eliminating those rules. We take this opportunity to address these issues. First, the *Part 25 Earth Station Streamlining NPRM* proposed eliminating radio-determination satellite service (RDSS) license applications.¹¹² The *Part 25 Earth Station Streamlining NPRM* also tentatively concluded that it could eliminate Part 25, Subpart H as obsolete resulting from the ORBIT Act,¹¹³ and eliminate references to the INTELSAT Agreement and INMARSAT Convention in Section 25.111(b) that became outdated upon privatization of those companies.¹¹⁴ Loral and Spacenet support these proposed revisions,¹¹⁵ and we received no

¹⁰⁹ Telesat Comments at 5.

¹¹⁰ *DISCO II*, 12 FCC Rcd at 24175 (paras. 189-90). The Commission made exceptions for financial qualification information in cases where the satellite is in orbit, and certain technical information when the coordination process has been completed. *DISCO II*, 12 FCC Rcd at 24175-76 (para. 191). We address both these exceptions below.

¹¹¹ Section III.B. *supra*.

¹¹² *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25156-57 (para. 88).

¹¹³ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25157 (para. 89); citing 47 C.F.R. Part 25, Subpart H; Section 645(1) of the Satellite Act of 1962, as amended by the ORBIT Act, 47 U.S.C. § 765d(1). Congress amended the Satellite Communications Act of 1962, 47 U.S.C. §§ 701 *et seq.* (Satellite Act) by adopting the Open-Market Reorganization for the Betterment of International Telecommunications Act, Pub. L. No. 106-180, 114 Stat. 48 (2000), codified at 47 U.S.C. § 761 *et seq.* (ORBIT Act). The ORBIT Act adds Title VI to the Satellite Act, entitled "Communications Competition and Privatization."

¹¹⁴ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25157 (para. 90).

oppositions. Accordingly, we conclude that these rules can be eliminated as obsolete for the reasons explained in the *Part 25 Earth Station Streamlining NPRM*.¹¹⁶

IV. EARTH STATION RULE REVISIONS

A. Background

51. We explained in the *Part 25 Earth Station Streamlining NPRM*¹¹⁷ that a "routine" earth station is one that meets all the technical standards for earth stations in Part 25 of the Commission's rules,¹¹⁸ including power spectral density and antenna diameter standards.¹¹⁹ To facilitate licensing these earth stations, we invited comment adopting a simplified form for these earth station applications.¹²⁰ The Commission also proposed revisions to existing forms for certain routine earth stations applications,¹²¹ and mandatory electronic filing for routine earth stations applications.¹²² In addition, the Commission proposed revisions intended to clarify the earth station modification rules.¹²³ We consider these proposals below.¹²⁴

¹¹⁵ Loral Earth Station Comments at 15; Spacenet Earth Station Comments at 47. See also SIA Earth Station Reply at 21-22.

¹¹⁶ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25156-57 (paras. 87-89). In addition to the elimination of the obsolete rules discussed here, the *Part 25 Earth Station Streamlining NPRM* solicited comment on eliminating the list of parties eligible to participate in the satellite digital audio radio service (DARS) license auction in Section 25.144(a). *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25156 (para. 87); citing 47 C.F.R. § 25.144(a). This proposed rule revision was mooted by a subsequent Order revising Section 25.144(a). See Amendment of Parts 1, 21, 22, 24, 25, 26, 27, 73, 74, 80, 90, 95, 100, and 101 of the Commission Rules – Competitive Bidding, *Order*, 17 FCC Rcd 6534 (Wireless Bur., 2002). Accordingly, we need not address this proposal further here.

¹¹⁷ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25132 (para. 7).

¹¹⁸ 47 C.F.R. Part 25.

¹¹⁹ In the conventional C-band (3700-4200 MHz and 5925-6425 MHz), the minimum earth station antenna diameter eligible for routine processing is 4.5 meters. In the conventional Ku-band (11.7-12.2 GHz and 14.0-14.5 GHz), the minimum earth station antenna diameter eligible for routine processing is 1.2 meters.

¹²⁰ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25150-51 (paras. 67-70).

¹²¹ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25151-52 (para. 71).

¹²² *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25153 (paras. 76-77).

¹²³ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25153-54 (paras. 78-81).

¹²⁴ We defer issues concerning streamlined review of "non-routine" earth station applications to a future Order.

B. Streamlined Earth Station Filing Form

1. Routine Conventional C-band and Ku-band Earth Station Applications

52. Currently, applicants must use Form 312 to apply for most earth station and space station licenses.¹²⁵ In the *Part 25 Earth Station Streamlining NPRM*, we proposed to create a streamlined version of Form 312 for routine conventional C-band and Ku-band earth station applications eligible for the International Bureau's "auto-grant" procedure, to be called "Form 312EZ."¹²⁶ Specifically, we proposed that the new form would contain a relatively short list of questions, including whether the applicant has completed a radiation hazard study, whether the applicant has completed the coordination if it requests authority to operate in the C-band, and whether the applicant is not owned in whole or in part by any foreign government or corporation.¹²⁷ If an applicant can answer "yes" to these questions, then it would be eligible for the auto-grant process and could submit Form 312EZ.¹²⁸ We also proposed limiting use of Form 312EZ to non-common-carrier applications.¹²⁹

53. Globalstar and Hughes support adopting a streamlined version of Form 312 for routine earth station applications.¹³⁰ Globalstar suggests creating "Not applicable" options on the electronic filing form for several questions, including the foreign ownership questions that track the specific provisions of Section 310(b),¹³¹ because they do not apply to non-common carriers.¹³² We have reviewed our proposed Form 312EZ in light of Globalstar's comments. Rather than limit this form to earth station applicants that seek to operate on a non-common carrier earth

¹²⁵ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25150 (para. 67); citing *1996 Streamlining Order*, 11 FCC Rcd at 21598 (para. 40).

¹²⁶ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25150-51 (paras. 68-70), citing *Commission Launches Earth Station Streamlining Initiative*, *Public Notice*, DA 99-1259 (released June 25, 1999) (*Ku-Band Auto-grant Public Notice*); *Commission Launches C-Band Earth Station Streamlining Initiative*, *Public Notice*, 15 FCC Rcd 24075 (2000) (*C-Band Auto-grant Public Notice*).

¹²⁷ *See Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25202-03 (App. D).

¹²⁸ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25151 (para. 69) and 25202-05 (App. D).

¹²⁹ *See Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25204 (App. D).

¹³⁰ Globalstar Earth Station Comments at 8; Hughes Earth Station Comments at 24. Hughes emphasizes that Form 312EZ would have to be modified to be consistent with its proposed antenna gain pattern and power level requirements if its proposals are adopted. Hughes Earth Station Comments at 24.

¹³¹ 47 U.S.C. § 310(b).

¹³² Globalstar Earth Station Comments at 8. In addition, Globalstar suggests creating "Not applicable" options on the electronic version of standard Form 312 for several questions, including certain technical information requests and foreign ownership questions because they claim that such questions may not apply to non-common carriers. The electronic version of Standard Form 312 already has "Not applicable" options for several questions. We direct our staff to review the electronic Form 312, and to add "Not applicable" options where appropriate.

station basis, as the Commission originally proposed, we find that the foreign ownership questions allow us to extend Form 312EZ to common carrier earth station applications. Accordingly, we will include "Not applicable" options for the foreign ownership questions that track Section 310(b), as Globalstar suggests.

54. Except for minor revisions to clarify some of the questions, we adopt Form 312EZ as it was proposed in the *Part 25 Earth Station Streamlining NPRM*. We include the final version of Form 312EZ as Appendix E to this Order. We delegate authority to the Chief, International Bureau, to make the electronic filing system revisions necessary to implement this new form. We also direct the International Bureau to issue a public notice at least 30 days before routine earth station applicants will be required to use Form 312EZ.

2. Ka-band Earth Station Applications

55. *Background.* In the *Part 25 Earth Station Streamlining NPRM*, the Commission invited comment on allowing earth station applicants seeking authority to operate in the Ka-band to use Form 312EZ.¹³³ Hughes supports this proposal.¹³⁴

56. *Discussion.* In the *Part 25 Earth Station Streamlining NPRM*, the Commission emphasized that it designed Form 312EZ to help identify earth station applications eligible for the auto-grant process.¹³⁵ A number of factors make it difficult to develop a Ka-band auto-grant process at this time. First, the Commission is considering revisions to many of the technical requirements for Ka-band earth stations. The Commission is in the process of developing service rules for NGSO FSS Ka-band satellite systems.¹³⁶ Furthermore, in the *Part 25 Earth Station Further Notice*, the Commission invited comment on revisions to the antenna gain pattern requirements for Ka-band earth stations.¹³⁷ Moreover, the Commission has invited comment on a proposal that would allow deployment of GSO FSS earth stations in the shared portion of the Ka-band, without individual site-by-site licensing.¹³⁸ Accordingly, we will not adopt provisions allowing Ka-band earth station applicants to use Form 312EZ at this time.

C. Renaming Form 701 and Form 405 for Earth Station Applications

¹³³ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25151 (para. 70).

¹³⁴ Hughes Earth Station Comments at 25.

¹³⁵ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25151 (para. 69).

¹³⁶ The Establishment of Policies and Service Rules for the Non-Geostationary Satellite Orbit, Fixed Satellite Service in the Ka-Band, *Notice of Proposed Rulemaking*, IB Docket No. 02-30, 17 FCC Rcd 2807 (2002).

¹³⁷ *Part 25 Earth Station Streamlining Further NPRM*, 17 FCC Rcd at 18613 (para. 69).

¹³⁸ FWCC Request for Declaratory Ruling on Partial-Band Licensing of Earth Stations in the Fixed-Satellite Service that Share Terrestrial Spectrum, *Notice of Proposed Rulemaking*, IB Docket No. 00-203, 15 FCC Rcd 23127, 23167-68 (paras. 98-99) (2000). See also FWCC Request for Declaratory Ruling on Partial-Band Licensing of Earth Stations in the Fixed-Satellite Service that Share Terrestrial Spectrum, *Second Report and Order*, IB Docket No. 00-203, 17 FCC Rcd 2002, 2006 (para. 9) (2002).

57. In the *Part 25 Earth Station Streamlining NPRM*, the Commission observed that several Commission forms relate to satellite network authorizations, including FCC Form 701 (Application for Additional Time to Construct), and FCC Form 405 (Application for Renewal of Radio Station License in Specified Services) and FCC Form 312 (Authorization of New Stations).¹³⁹ Forms 405 and 701 are Commission-wide forms used for a variety of communications services and facilities. To clarify their use for earth station applications, we proposed creating forms identical to Forms 405 and 701 except for their names.¹⁴⁰ Form 312-R would be used in lieu of Form 405 to request license renewals, and Form 312-M, would be used in lieu of Form 701 to request milestone extension requests.¹⁴¹

58. SLA does not object to renaming these forms.¹⁴² Loral supports renaming these forms, but recommends making them schedules to Form 312, similar to the Form 601 used by the Wireless Telecommunications Bureau.¹⁴³

59. We rename FCC Form 405 as Form 312-R when used in the context of earth station licensing, as proposed in the *Part 25 Earth Station Streamlining NPRM*. We will not make this form a schedule to Form 312 as Loral suggests because that would require parties seeking earth station license renewals to complete the Main Form of Form 312, and so would increase the paperwork burden associated with these applications.¹⁴⁴ Form 312-R will be available 60 days after a summary of this Order is published in the Federal Register.

60. We need not rename FCC Form 701, however, because we can eliminate it all together. As we noted above, Form 701 is used by many Bureaus in the Commission in addition to the International Bureau. Subsequent to our adoption of the *Part 25 Earth Station Streamlining NPRM*, some of those other Bureaus stopped requiring milestone extension requests to be filed on Form 701. To be consistent, the International Bureau stopped using Form 701 as well. Consequently, we revise Section 25.117 of our rules to remove the reference to Form 701. Because satellite licenses contain milestones as license conditions, satellite operators seeking milestone extensions should file an application for a license modification using Form 312. We revise Section 25.117 to make this clear.¹⁴⁵ Finally, we take this opportunity to revise Section 25.117 to reflect milestone revisions adopted in the *First Space Station Reform Order*.¹⁴⁶

¹³⁹ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25151-52 (para. 71).

¹⁴⁰ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25152 (para. 71).

¹⁴¹ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25152 (para. 71).

¹⁴² SLA Earth Station Reply at 18.

¹⁴³ Loral Earth Station Comments at 12.

¹⁴⁴ Eventually, the Commission hopes to upgrade IBFS so that it directs new earth station license applicants and earth station renewal applicants to the correct questions, without requiring them to identify a particular form.

¹⁴⁵ Thus, the fee for most milestone extension requests is \$6670. The exception is requests for extension of the launch milestone. The fee schedule in Section 1.1107 of the Commission's rules establishes separate fees for requests for extension of launch authority: \$670 for GSO satellites, and \$2305 for NGSO systems. 47 C.F.R. § 1.1107.

¹⁴⁶ *First Space Station Reform Order* at paras. 173-208.

D. Electronic Filing

1. Mandatory Electronic Filing for Routine Earth Station License Applications

61. In the *Part 25 Earth Station Streamlining NPRM*, we proposed requiring applications for routine C-band and Ku-band earth station licenses, assignments, and transfers to be filed electronically.¹⁴⁷ We observed that electronically filed applications are usually processed in about half the time required to process paper applications.¹⁴⁸

62. Loral advocates mandatory electronic filing because it would enable members of the public to obtain documents through the International Bureau's website.¹⁴⁹ Globalstar supports a mandatory electronic filing requirement for all earth station applications, routine as well as non-routine earth station applications, if it would expedite the processing of those applications.¹⁵⁰

63. SIA supports electronic filing, but requests that we do not adopt mandatory electronic filing unless we establish back-up filing procedures in the event that there are difficulties with the electronic filing system.¹⁵¹ Hughes argues that the electronic filing system may not be reliable enough to be the only means of filing applications. Hughes suggests allowing parties to file paper applications, and require an electronic copy to be filed within 30 days.¹⁵²

64. We adopt mandatory electronic filing for routine C-band and routine Ku-band earth station applications, and for earth station assignment and transfer of control applications. We require these applicants to continue to file their applications on standard Form 312 until Form 312EZ becomes available. Our electronic filing system for earth station applications has been in place for several years. Moreover, contrary to SIA's comments, the Commission already has a back-up electronic filing system that is fully sufficient to take the place of the main IBFS server should that be necessary. We also have a server at an alternative site available in extreme

¹⁴⁷ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25153 (para. 76).

¹⁴⁸ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25153 (para. 76).

¹⁴⁹ Loral Earth Station Comments at 14-15.

¹⁵⁰ Globalstar Earth Station Comments at 2 n.1.

¹⁵¹ SIA Earth Station Reply at 19.

¹⁵² Hughes Earth Station Comments at 25. Hughes and Spacenet are particularly concerned about mandatory electronic filing for applications in processing rounds which must be filed before a certain date to be considered. Hughes Earth Station Comments at 25; Spacenet Earth Station Comments at 45. Because Hughes and Spacenet raised this concern with respect to proposed mandatory electronic filing for earth station applications, and because earth station applications are not granted pursuant to processing rounds, this concern is not relevant. In any case, we explained in Section III.E. above that we will not allow our space station mandatory electronic filing requirement to take effect until we are certain that the electronic filing system is reliable.

emergencies. Based on the back-up systems, and our experience with electronic filing systems,¹⁵³ we conclude that Hughes's concerns regarding the reliability of our system are unfounded.

65. We permit but not require electronic filing for applications for licenses other than routine C-band and Ku-band earth stations. The Commission's proposal in the *Part 25 Earth Station Streamlining NPRM* was limited to routine C-band and Ku-band earth station applications.¹⁵⁴ Furthermore, although electronic filing enables us to process applications more quickly, we do not have enough experience with some earth station applications, such as Ka-band applications, to devise an all-inclusive electronic form for these applications.

66. We will not adopt Hughes's proposal to permit parties to file a paper and an electronic version of their applications. Such double-filing would require unnecessary additional staff time simply to compare paper and electronic applications, to determine whether a paper application is a duplicate of an electronic application or a new or modified application. Such an increase in the Commission's workload would divert resources from reviewing the contents of earth station applications, and so it would make it more difficult to act on those applications in a timely fashion.¹⁵⁵

67. In summary, we require the following earth station applications to be filed electronically: (1) routine conventional C-band and Ku-band earth station license applications; (2) all assignment requests; and (3) all transfer of control applications. All other earth station applications are permitted but not required to be filed electronically. All earth station applications must be filed on standard Form 312, except for renewal applications, which must be filed on Form 312-R. Routine conventional C-band and Ku-band earth station license applications will be required to file on Form 312EZ when that form becomes available.

2. Electronically Filed Petitions to Deny and Comments

¹⁵³ The Commission has adopted mandatory electronic filing requirements in several other contexts. See *First Space Station Reform Order* at para. 247; Wireline Competition Bureau Initiates Electronic Filing of Automated Reporting Management Information System (ARMIS) Data and Associated Documents By Incumbent Local Exchange Carriers, *Public Notice*, 18 FCC Rcd 3245 (Wireline Comp. Bur., 2003); Amendment of the Commission's Rules for Implementation of its Cable Operations And Licensing System (COALS) to Allow for Electronic Filing of Licensing Applications, Forms, Registrations and Notifications in the Multichannel Video and Cable Television Service and the Cable Television Relay Service, *Report and Order*, CS Docket No. 00-78, 19 FCC Rcd 5162 (2003); Wireless Telecommunications Bureau (WTB) Extends Mandatory Electronic Filing Date for Microwave Licensees to Coincide with Availability of Electronic Filing Via the Internet, *Public Notice*, 15 FCC Rcd 15692 (Wireless Tel. Bur., 2000); 1998 Biennial Review – Streamlining of Mass Media Applications, Rules and Processes, *Report and Order*, MM Docket No. 98-43, 13 FCC Rcd 23056, 23060 (para. 8) (1998); Electronic Tariff Filing System (ETFS), *Order*, 13 FCC Rcd 12335 (Com. Car. Bur. 1998) (*ETFS Order*).

¹⁵⁴ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25153 (para. 76).

¹⁵⁵ Another Bureau has considered and rejected proposals to allow parties to submit both electronic and paper copies of a filing. *ETFS Order*, 13 FCC Rcd at 12337 (para. 7). See also Amendment of Part 22 of the Commission's Rules to Revise Certain Filing Procedures for the Mobile Services Division Applications and to Eliminate Form 430, *Further Order on Reconsideration*, CC Docket No 88-161, 5 FCC Rcd 7116, 7117 (para. 11) (1990) (rejecting proposals to allow certain filings to be submitted on both paper and microfiche).

68. In the *Part 25 Earth Station Streamlining NPRM*, we also proposed creating an Internet filing form that would be used to accept electronically filed petitions to deny or comments on earth station license applications.¹⁵⁶ Hughes does not oppose allowing electronic filing for comments on or petitions to deny license applications as a general proposition, but opposes a mandatory electronic filing requirement for these pleadings. Hughes argues that the electronic filing system is still in the early stages of development and may not be reliable enough to be the only means of filing oppositions to applications, which must be filed before a certain date to be considered.¹⁵⁷

69. In this Order, we adopt mandatory electronic filing requirements for space station applications and for routine earth station applications. Any electronic filing system adequate to handle large electronic files in space station applications, such as antenna gain contour diagrams, should be adequate to handle pleadings filed in response to earth station applications, which will be word processing documents in most cases. Accordingly, we will require parties to file pleadings in the IBFS system electronically in response to applications, such as petitions to deny, comments, or replies. This requirement will take effect concurrently with the availability of Form 312EZ as discussed above. We direct the Chief, International Bureau to make the electronic filing system revisions necessary to implement this electronic filing initiative, and we delegate authority to the Bureau for this purpose. We emphasize that this mandatory electronic filing requirement will apply only to pleadings in response to *non-docketed* routine earth station applications. Electronically filed pleadings in docketed proceedings will continue to be filed in the Commission's Electronic Comment Filing System (ECFS).

70. Globalstar requests that we clarify whether we are considering mandatory electronic filing for oppositions to all earth station applications or only for routine earth station applications.¹⁵⁸ In the *Part 25 Earth Station Streamlining NPRM*, the Commission did not specifically limit its proposal to oppositions to routine earth station applications.¹⁵⁹ There is nothing in the record before us now that would justify treating oppositions to some earth station applications different from oppositions to other earth station applications. Accordingly, we require electronic pleadings in response to both routine and non-routine earth station applications.

E. Earth Station License Modification Requirements

1. Clarifying Revisions

71. *Background.* In the *Part 25 Earth Station Streamlining NPRM*, the Commission proposed rule revisions to clarify its earth station license modification rules in Sections 25.117 and 25.118. In light of our decision to modify our space station license modification rules in Sections 25.117 in this Order above, we take this opportunity to consider our earth station modification proposals.

¹⁵⁶ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25153 (para. 77).

¹⁵⁷ Hughes Earth Station Comments at 25; Hughes Earth Station Reply at 17-18.

¹⁵⁸ Globalstar Earth Station Comments at 2 n.1.

¹⁵⁹ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25153 (para. 77).

72. Section 25.118 of our rules allows earth station operators to make "minor" modifications to their licenses without prior Commission authorization.¹⁶⁰ In most cases, the earth station operator is required only to notify the Commission within 30 days of a minor modification of operations.¹⁶¹ In addition, in cases in which the earth station operator is merely replacing equipment with "electrically identical" equipment, it may do so without prior authorization, and it is not even required to notify the Commission prior to making the modification.¹⁶² In contrast, Section 25.117 of our rules states that an operator may not make "major" modifications to its operations without prior Commission approval. Licensees seeking to make major modifications to its earth station must file an application to do so. We would then place the application on 30-day public notice. In the *Part 25 Earth Station Streamlining NPRM*, we acknowledged that the rules were potentially confusing regarding whether a particular modification is minor or major.¹⁶³ We therefore proposed to reorganize the rules to eliminate the potentially confusing language. Specifically, we proposed to list all possible "minor" modifications in Section 25.118. Anything not included in Section 25.118 would constitute a major modification under Section 25.117.¹⁶⁴

73. *Discussion.* WorldCom supports our efforts to clarify Sections 25.117 and 25.118.¹⁶⁵ Globalstar supports clarifying Sections 25.117 and 25.118, but asserts that it is still unclear when changes to antenna facilities constitute a major or a minor modification.¹⁶⁶ Globalstar also interprets our proposed revisions to Section 25.118 as unreasonably limiting the earth station minor modification procedure to replacements of equipment with "electrically identical" equipment.¹⁶⁷ According to Globalstar, the proposed revisions to Section 25.118 are too limiting because it would not permit a licensee operating a network of mobile earth terminals (METs) to add terminals without prior authorization when the only difference in equipment is that one model is digitized voice and the other is non-voice data.¹⁶⁸

74. The Commission intended the proposed rule revisions to clarify the distinction between major and minor modifications.¹⁶⁹ In general, a modification is minor when the proposed change does not increase the potential for interference into other licensed radio facilities. In the proposed revision, however, we inadvertently duplicated some of the potentially

¹⁶⁰ 1996 *Streamlining Order*, 11 FCC Rcd at 21594 (para. 32).

¹⁶¹ 1996 *Streamlining Order*, 11 FCC Rcd at 21594 (para. 32).

¹⁶² 47 C.F.R. 25.118(a).

¹⁶³ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25153 (para. 78).

¹⁶⁴ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25153-54 (paras. 78-79).

¹⁶⁵ WorldCom Earth Station Comments at 3. See also SIA Earth Station Reply at 20.

¹⁶⁶ Globalstar Earth Station Comments at 5-6.

¹⁶⁷ Globalstar Earth Station Comments at 6.

¹⁶⁸ Globalstar Earth Station Comments at 6.

¹⁶⁹ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25154 (para. 80). The Commission did propose substantive revisions to Section 25.117 separate from its proposed reorganization. We address those proposed revisions below.

confusing language of the current Sections 25.117 and 25.118. Accordingly, we amend the rules to clarify when a change to antenna facilities does not require prior authorization. We also clarify that minor modifications are not limited to cases in which a licensee replaces equipment with "electrically identical" equipment. Rather, replacing equipment with "electrically identical" equipment is a subclass of minor modification in which the licensee is not required to obtain prior authorization or notify the Commission. The revisions to Section 25.118 we adopt in this Order make clear that the earth station modification procedure is not as limited as Globalstar assumes. Adding digitized voice terminals to a network of non-voice data terminals, and vice-versa, is a minor modification which requires Commission notification within 30 days, but not prior Commission authorization.¹⁷⁰

75. In addition, Section 25.118(b) of the current rules allows licensees to change from private carrier to common carrier status without prior authorization. The Commission did not intend to propose changing this, and so the proposed revisions to Section 25.118 might be misleading.¹⁷¹ We revise Section 25.118 to correct this error. Finally, we make other clarifying, non-substantive revisions to Sections 25.117 and 25.118 as set forth in Appendix B.

2. Substantive Revisions

76. In addition to revising Sections 25.117 and 25.118 to clarify any confusion, the Commission proposed substantive revisions to these rules as well. First, the Commission sought comment on eliminating Section 25.117(a)(1), which relates to modifications involving Article XIV(d) coordination with INTELSAT.¹⁷² Article XIV(d) has been superceded by the ORBIT Act, which requires INTELSAT to conduct technical coordination "under International Telecommunication Union procedures and not under Article XIV(d) of the INTELSAT Agreement."¹⁷³ The *Part 25 Earth Station Streamlining NPRM* also proposed eliminating Section 25.117(a)(2), which relates to the "transborder" service policy. The "transborder" policy was eliminated by the *DISCO I Order*.¹⁷⁴ SIA supports the elimination of Sections 25.117(a)(1) and 25.117(a)(2),¹⁷⁵ and no one opposes it. Therefore, we eliminate these rules.¹⁷⁶

¹⁷⁰ "[A]n authorized earth station licensee may add, change or replace transmitters or antenna facilities without prior authorization, provided: (i) The added, changed, or replaced facilities conform to Section 25.209 of this Chapter; (ii) The particulars of operations remain unchanged; (iii) Frequency coordination is not required; and (iv) The maximum power and power density delivered into any antenna at the earth station site shall not exceed the values calculated by subtracting the maximum antenna gain specified in the license from the maximum authorized e.i.r.p. and e.i.r.p. density values." Appendix B, revised Section 25.118(a)(2).

¹⁷¹ See *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25177 (App. B, proposed Section 25.118(a)(1)(v)).

¹⁷² *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25154 (para. 80); 47 C.F.R. § 25.117(a)(1).

¹⁷³ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25154 (para. 80), citing Section 622 of the Satellite Act, as amended by the ORBIT Act, 47 U.S.C. § 763a.

¹⁷⁴ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25154 (para. 81), citing Amendment to the Commission's Regulatory Policies Governing Domestic Fixed Satellites and Separate International Satellite Systems, *Report and Order*, CC Docket No. 95-41, 11 FCC Rcd 2429 (1996) (*DISCO I Order*); Amendment of Part 25 of the Commission's Rules and Regulations to Reduce Alien Carrier Interference Between Fixed-Satellites at Reduced Orbital Spacing and to Revise Application Processing Procedures for Satellite Communications Services, *First Report and Order*, CC Docket No. 86-

77. Loral suggests an additional substantive revision. Under our current rules and in our proposed revisions, an increase in earth station power is a major modification that requires prior Commission authorization. Loral suggests a new streamlined procedure for modifications to increase power in which the new power level does not exceed permitted routine levels.¹⁷⁷ Loral recommends placing these modification applications on public notice, and construing them as granted automatically upon expiration of the 30-day public notice period if they are unopposed.¹⁷⁸ No one commented on Loral's proposal. We will not adopt Loral's suggestion at this time. With respect to C-band earth stations, any increase in power could require recoordination of the earth station operations with terrestrial operations sharing the band, and therefore, we cannot allow such modifications without prior authorization. Moreover, Loral's recommendation would create a new classification of modification, which could add complexity to our modification rules, and so could increase the time needed to review all modification applications. In addition, we now can act on unopposed major modifications fairly soon after the end of the 30-day public notice period, so Loral's suggested procedure would not shorten the time needed to act on these modification applications by very much. Thus, Loral's procedure would provide at most a small benefit for a limited class of modification application, at the cost of increased regulatory complexity and potential confusion.

F. Earth Stations Operating in More than One Frequency Band

78. SIA recommends clarifying that earth station operators are allowed to request authority to operate in more than one frequency band in a single earth station application.¹⁷⁹ SIA is correct. We have no rules or policies precluding such applications.

79. In the past, our staff informally encouraged earth station operators to file separate applications for authority to operate in separate frequency bands, since the electronic filing system we used before we developed IBFS did not accommodate multiple band earth station licenses very well. Our current electronic filing system, IBFS, easily accommodates multiple-band earth station license applications, however. Therefore, we no longer have any reason to discourage multiple band earth station licenses.

80. We remind earth station licensees that we have different service rules for each frequency band. Authorizing use of more than one frequency band in a single license does not

496, 6 FCC Rcd 2806, 2811 (paras. 33-34) (1991). Prior to the *DISCO I Order*, the Commission applied different regulatory regimes to domestic satellite service and international satellite service, with the exception of "transborder" satellite service between the United States and Canada or Mexico. See *DISCO I Order*, 11 FCC Rcd at 2430 (para. 7). The *DISCO I Order* superseded the transborder policy by allowing all U.S.-licensed fixed satellite systems to offer both domestic and international services. *DISCO I Order*, 11 FCC Rcd at 2440 (para. 74).

¹⁷⁵ SIA Earth Station Reply at 20.

¹⁷⁶ See *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25154 (paras. 80-81).

¹⁷⁷ Loral Earth Station Comments at 13-14.

¹⁷⁸ Loral Earth Station Comments at 13-14.

¹⁷⁹ SIA Earth Station Reply at 24-25.

change that. Accordingly, we will review these applications on a case-by-case basis to ensure that any license issued states clearly the requirements applicable to each frequency band. Furthermore, in cases where a multiple frequency band earth station application raises a controversial issue with respect to only one frequency band, we reserve the right to grant the application in part with respect to the uncontroversial frequency band and to dismiss in part without prejudice with respect to the controversial frequency band. This approach will avoid delaying service to the public in the uncontroversial frequency band.

G. Specification of Common Carrier Status

81. Loral recommends removing question 21 from Form 312, requiring applicants to specify whether they will operate on a common carrier or non-common carrier basis. Loral maintains that this information is no longer relevant.¹⁸⁰ We disagree. Common carriers are subject to a variety of service obligations under the Communications Act.¹⁸¹ It also requires earth station licensees providing commercial mobile radio services (CMRS) to act as common carriers.¹⁸² Requiring earth station license applicants to identify whether they are seeking an authorization that can be used for common carrier service imposes minimal burdens on those applicants, and is information that may have a significant bearing on the statutory criteria relevant for evaluating the application. We will modify the language of Form 312, question 21, however, to reflect the fact that earth station authorizations may support both common carrier and non-common carrier services. In other words, an earth station licensed as a "common carrier" earth station may also provide non-common carrier services.

V. SUMMARY AND CONCLUSIONS

82. In this Order, we adopt many of the revisions to Schedule S that we proposed in the *Space Station Reform NPRM*, and we adopt other revisions suggested by commenters. In addition, we adopt our proposed streamlined filing form for routine earth station applications. We modify slightly other earth station filing forms, and we adopt a mandatory electronic filing requirement for routine earth station applications.

VI. FURTHER NOTICES OF PROPOSED RULEMAKING

83. In this Order and in previous Orders, the Commission has adopted several satellite-related mandatory electronic filing requirements. We require mandatory electronic filing requirements for all space station applicants other than DBS and DARS applicants. We also require mandatory electronic filing requirements for routine earth station license applicants, and for earth station assignments and transfer of control applications. Parties filing petitions to deny routine earth station applications, or other pleadings in response to routine earth station applications, will also be required to file electronically.¹⁸³

¹⁸⁰ Loral Earth Station Comments at 12.

¹⁸¹ 47 U.S.C. § 201.

¹⁸² 47 U.S.C. § 332(c)(1).

¹⁸³ All the space station mandatory electronic filing requirements will take effect 60 days after a summary of the Order is published in the Federal Register, subject to OMB approval. Earth station mandatory electronic filing requirements will take effect 30 days after the International Bureau issues a public notice announcing that the forms are available.

84. In this Second Further Notice of Proposed Rulemaking in IB Docket No. 02-34 and Second Further Notice of Proposed Rulemaking in IB Docket No. 00-248, we invite comment on extending electronic filing requirements to all pleadings governed by Part 25 of the Commission's rules. The Commission has noted in the past that electronic filing enables us to act on applications more quickly.¹⁸⁴ In addition, by extending mandatory electronic filing to all satellite and earth-station-related filings, we will reduce any potential confusion over whether a particular application must be filed electronically. We also propose extending Schedule S to DARS licensees and applicants, including modification applications. At this time, we do not propose extending use of Form 312EZ to earth station applications other than routine C-band and routine Ku-band earth station applications. Instead, we propose requiring such other earth station applicants to file electronically on standard Form 312.

85. As noted above, the Commission excluded DBS and DARS from the proposals in the *Space Station Reform NPRM*.¹⁸⁵ Therefore, the streamlined procedure for satellite fleet management modifications adopted in the *Second Space Station Reform Order* was limited to modifications of satellite licenses other than DBS and DARS.¹⁸⁶ It is not clear whether any public policy is served by precluding DBS and DARS licensees from using the fleet management modification procedure. In addition, just as extending mandatory electronic filing requirements to all satellite and earth station filings would simply Part 25 of the Commission's rules, eliminating the DBS and DARS exception to the satellite fleet management modification procedure would also simplify the Commission's rules. Accordingly, in this Second Further NPRM, we invite comment on extending the satellite fleet management modification procedure to DBS and DARS licenses. We also seek comment on whether DBS and DARS licensees should be required to make any certifications that are not applicable to FSS providers making fleet management modifications. For example, one possible required certification might be that a proposed DBS modification shall not cause greater interference than that which would occur from the current U.S. assignments in the International Telecommunication Union (ITU) Region 2 BSS Plan and its associated Feeder Link Plan. Another possibility is to require certifications that the licensee will meet the geographic service requirements in Section 25.148(c) of the Commission's rules.¹⁸⁷ We invite interested parties to comment on these proposals, and to recommend other possible certification requirements.

VII. PROCEDURAL MATTERS

86. *Final Regulatory Flexibility Analysis*. As required by the Regulatory Flexibility Act (RFA),¹⁸⁸ an Initial Regulatory Flexibility Analysis (IRFA) was incorporated into the *Space Station Reform NPRM*¹⁸⁹ and the *Part 25 Earth Station Streamlining NPRM*.¹⁹⁰ The Commission

¹⁸⁴ See *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25153 (para. 76).

¹⁸⁵ *Space Station Reform NPRM*, 17 FCC Rcd at 3850 n.4.

¹⁸⁶ *Second Space Station Reform Order* at App. B (Section 25.118(e)). Currently, only one DARS licensee operates a GSO satellite system, while the other operates an NGSO satellite system. We are not proposing a streamlined procedure for NGSO satellite system modifications in this Order.

¹⁸⁷ 47 C.F.R. § 25.148(c).

¹⁸⁸ See 5 U.S.C. §603.

¹⁸⁹ *Space Station Reform NPRM*, 17 FCC Rcd at 3915-17 (App. D).

sought written public comments on the possible significant economic impact of the proposed policies and rules on small entities in the *Space Station Reform NPRM* and the *Part 25 Earth Station Streamlining NPRM*, including comments on the IRFA. No one commented specifically on the IRFA. Pursuant to the RFA,¹⁹¹ a Final Regulatory Flexibility Analysis is contained in Appendix F.

87. *Initial Regulatory Flexibility Analysis.* Appendix G to this document contains the analysis required for the proposals in this *Second Further Notice of Proposed Rulemaking* by the Regulatory Flexibility Act of 1980, see 5 U.S.C. § 603.

88. *Paperwork Reduction Act Analysis.* This Order contains proposed new and modified information collections. As part of its continuing effort to reduce paperwork burdens, we invite the general public and the Office of Management and Budget (OMB) to take this opportunity to comment on the information collections contained in this Order, as required by the Paperwork Reduction Act of 1995, Public Law 104-13. Comments should address: (a) whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimates; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology. Written comments on the proposed and/or modified information collections must be submitted on or before 60 days after date of publication in the Federal Register.

89. This NPRM contains proposed new and modified information collections. As part of its continuing effort to reduce paperwork burdens, we invite the general public and the Office of Management and Budget (OMB) to take this opportunity to comment on the information collections contained in this NPRM, as required by the Paperwork Reduction Act of 1995, Public Law 104-13. Public and agency comments are due 30 days from the date of publication in the Federal Register; OMB comments are due 60 days from date of publication of this NPRM in the Federal Register. Comments should address: (a) whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimates; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology.

90. A copy of any comments on the information collections contained herein should be submitted to Judy Boley Herman, Federal Communications Commission, Room 1-C804, 445 12th Street, SW, Washington, DC 20554, or via the Internet to jbHerman@fcc.gov and to Kim A. Johnson, OMB Desk Officer, Room 10236 NEOB, 725 17th Street, N.W., Washington, DC 20503 or via the Internet to jthornto@mb.eop.gov.

91. *Ex Parte Presentations.* This is a permit-but-disclose rulemaking proceeding. *Ex parte* presentations are permitted, provided they are disclosed as provided in Sections 1.1202,

¹⁹⁰ *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25212-15 (App. G).

¹⁹¹ See 5 U.S.C. §604.

1.1203, and 1.1206(a) of the Commission's Rules, 47 C.F.R. Sections 1.1202, 1.1203, and 1.1206(a).

92. *Comment.* Pursuant to Sections 1.415 and 1.419 of the Commission's Rules, 47 C.F.R. Sections 1.415 and 1.419, interested parties may file comments on or before 30 days following publication in the Federal Register, and reply comments on or before 60 days following publication in the Federal Register. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS) or by paper copies. See *Electronic Filing of Documents in Rulemaking Proceedings*, 63 Fed. Reg. 24,121 (1998).

93. Comments filed through the ECFS can be sent as an electronic file via the Internet to <http://www.fcc.gov/e-file/ecfs.html>. Generally, only one copy of an electronic submission must be filed. If multiple docket or rulemaking numbers appear in the caption of this proceeding, however, commenters must transmit one electronic copy of the comments to each docket or rulemaking number referenced in the caption. In completing the transmittal screen, commenters should include their full name, Postal Service mailing address, and the applicable docket or rulemaking number. Parties may also submit an electronic comment by Internet e-mail. To obtain filing instructions for e-mail comments, commenters should send an e-mail to ecfs@fcc.gov, and should include the following words in the body of the message, "get form <your e-mail address.>" A sample form and directions will be sent in reply.

94. Parties who choose to file by paper must file an original and four copies of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, commenters must submit two additional copies for each additional docket or rulemaking number. All filings must be sent to the Commission's Secretary, Marlene H. Dortch, Office of the Secretary, Federal Communications Commission, The Portals, 445 Twelfth Street, S.W., Room TW-A325, Washington, D.C. 20554.

95. Parties who choose to file by paper should also submit their comments on diskette. These diskettes should be submitted to: Commission's Secretary, Marlene H. Dortch, Office of the Secretary, Federal Communications Commission, The Portals, 445 Twelfth Street, S.W., Room TW-A325, Washington, D.C. 20554. Such a submission should be on a 3.5-inch diskette formatted in an IBM compatible format using Word for Windows or compatible software. The diskette should be accompanied by a cover letter and should be submitted in "read only" mode. The diskette should be clearly labeled with the commenter's name, the docket number of this proceeding, type of pleading (comment or reply comment), date of submission, and the name of the electronic file on the diskette. The label should also include the following phrase "Disk Copy - Not an Original." Each diskette should contain only one party's pleading, preferably in a single electronic file. In addition, commenters must send diskette copies to the Commission's copy contractor, Qualex International, Portals II, 445 12th Street, S.W., Room CY-B402, Washington, D.C. 20554.

96. *Additional Information.* For general information concerning this rulemaking proceeding, contact Steven Spaeth, International Bureau, at (202) 418-1539, International Bureau; Federal Communications Commission, Washington, DC 20554.

VIII. ORDERING CLAUSES

97. Accordingly, IT IS ORDERED, pursuant to Sections 4(i), 7(a), 11, 303(c), 303(f), 303(g), and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 157(a),

161, 303(c), 303(f), 303(g), 303(r), that this Third Report and Order in IB Docket No. 02-34 and Third Report and Order in IB Docket No. 00-248 is hereby ADOPTED.

98. IT IS FURTHER ORDERED that Part 25 of the Commission's rules IS AMENDED as set forth in Appendix B.

99. IT IS FURTHER ORDERED that the revisions to Part 25 adopted in this Order and set forth in Appendix B, will be effective 60 days after a summary of this Order is published in the Federal Register, pending approval by the Office of Management and Budget.

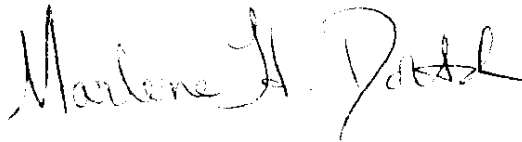
100. IT IS FURTHER ORDERED that authority is delegated to the Chief, International Bureau, as set forth in this in this Order above.

101. IT IS FURTHER ORDERED that the Consumer Information Bureau, Reference Information Center, SHALL SEND a copy of this Order, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

102. IT IS FURTHER ORDERED, pursuant to Sections 4(i), 7(a), 303(c), 303(f), 303(g), and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 157(a), 303(c), 303(f), 303(g), 303(r), that this Second Further Notice of Proposed Rulemaking in IB Docket No. 02-34 and Second Further Notice of Proposed Rulemaking in IB Docket No. 00-248 is hereby ADOPTED.

103. IT IS FURTHER ORDERED that the Consumer Information Bureau, Reference Information Center, SHALL SEND a copy of this Second Further Notice of Proposed Rulemaking in IB Docket No. 02-34 and Second Further Notice of Proposed Rulemaking in IB Docket No. 00-248, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION



Marlene H. Dortch
Secretary